-1- (JAPIO)

ACCESSION NUMBER	85-262353
TITLE	MANUFACTURE OF NEGATIVE ZINC ALLOY POWDER FOR ALKALINE BATTERY
PATENT APPLICANT	(2000353) TOSHIBA BATTERY CO LTD
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PATENT NUMBER	85.12.25 J60262353, JP 60-262353
APPLICATION DETAILS	84.06.07 84JP-115481, 59-115481
SOURCE	86.05.17 SECT. E, SECTION NO. 404; VOL. 10, NO. 133, PG. 49.
INT'L PATENT CLASS	H01M-004/42; H01M-004/12
JAPIO CLASS	42.9 (ELECTRONICS--Other)

ABSTRACT

PURPOSE: To obtain a negative zinc alloy powder which greatly suppresses the generation of hydrogen gas by subjecting an electrolyte solution containing elements for constituting the negative powder to electrolysis to deposit the elements on the surface of the negative electrode and then melting and atomizing the resulting electrodeposited material to pulverize it.

CONSTITUTION: An electrolyte solution containing elements for constituting a zinc alloy of a desired composition is prepared. Next, while the temperature of the solution is properly maintained, electrolysis is performed with a given current density to deposit the elements on the surface of a negative electrode. A positive electrode made of carbon is usually used and an aluminum electrode with a smooth surface is used as the negative electrode. The thus electrodeposited cake composed of the elements is then molten and atomized to alloy and pulverize the whole cake. During this process, the particle diameter of the alloy powder is controlled by properly selecting atomization conditions such as hole diameter, atomization pressure and molten zinc temperature. By the means mentioned above, it is possible to minimize variation in the content of lead over its certain range.